ART. XX.—*Summary of the Proceedings of the Pathological Society of Philadelphia.*

1870. *Oct.* 10. *Cancer of Stomach, with Cheesy Deposits in Lungs, of later Formation.*—Dr. JAMES C. WILSON presented the specimens and furnished the following history:—

Margaret O'Brian, Irish, æt. 46, married; a domestic. Lost a brother and one sister by phthisis pulmonalis. No history of cancerous disease in her family. Her health was always good until April, 1869, from which time she dated the beginning of her illness. While at work as laundress, she was suddenly seized with violent dysenteric symptoms, frequent vomiting—the ejecta containing occasionally a little dark blood—and diarrhœa, the stools being small, dark, and containing bloody mucus. She had high fever and became very prostrate, and in a short time noticed œdema of feet and ankles. After a long illness, she improved somewhat, and was admitted to the Pennsylvania Hospital in October, 1869. At that time she had no vomiting, but frequent, copious discharges from the bowels; and a small, hard, movable, non-sensitive mass, about the size of an egg, was noticed in the epigastric region, but no other tumour was detected. Her menses ceased from the beginning of her illness. She remained in the hospital four months, and felt well enough at the time of her discharge to return to her work as a domestic. She continued, however, to be weak and miserable until her readmission, August 10, 1870, having had in the meanwhile continual diarrhœa and frequent slight œdema of the feet, with at least one attack of severe vomiting and purging, with fever, similar to that with which her sickness began.

On admission she was very pale and weak; her face pinched; colour anæmic and sallow; conjunctiva slightly cholæmic; tongue clean and glazed; there was frequent vomiting; bowels moved frequently and irregularly, the stools being large, watery, whitish, very offensive; pulse 80, feeble; urine about normal in quantity and appearance; it showed no albumen, no deposit on standing. There were no cardiac or pulmonary symptoms.

On palpation, a hard, movable, non-sensitive mass, the size of a fist, was felt in the epigastrium, slightly to the left of the median line.

Her condition remained much the same, with occasional brief amelioration, and the addition of slight pains at times, referred to epigastrium and to upper part of chest, until the middle of October, when she became much worse, rejected food, had profuse diarrhœa, sank rapidly, and died November 2d, of exhaustion.

Autopsy five hours after death.—Cancerous cachexia evident, if not marked; rigor mortis established; emaciation extreme; ankles slightly œdematous; absence of abdominal dropsy; firm, though not extensive, adhesions between the greater curvature of the stomach and the transverse colon. The stomach contained a quantity of dark, turbid fluid, resembling broken-down blood, and presented on its mucous surface a large, irregular, cancerous mass, of moderately firm consistence, occupying the pyloric extremity of the organ, and chiefly its greater curvature. The pylorus was not encroached upon to any considerable extent by this growth. The pancreas showed no cancer; the liver none. The latter viscus was large, highly anæmic, markedly fatty, and of a light creamy-brown colour. Throughout the right lung, and especially at its apex, were numerous small, hard deposits; a few points were also found scattered through the left lung. There was no enlargement of either the mesenteric or bronchial glands. The other viscera were normal in appearance.

Dr. GEORGE PEPPER said this case had been under his constant observation during two terms of service of Dr. J. F. Meigs. During the past two months, and during the corresponding months of last year, there was a tumour in the epigastrium as large as an English walnut, but so entirely without pain or other symptom was it for a long time, that it was scarcely thought to have had anything to do with her disease. Finally, however, there developed the symptoms which proved its association; but throughout there was little or no pain, and, until the last, only occasional vomiting. The mass was always quite movable, situated to the left of the median line, and when she lay upon her right side, it would fall over into the right hypochondrium. Indeed, it seemed more like disease of the greater curvature of the stomach, or omentum, or large intestine.

The history of the disease dated back at least one year, and during the whole of that time she was failing steadily and progressively. The condition of the lung was not suspected during life. Dr. Pepper had never heard of her coughing. She certainly never complained of her chest, and at the examination on admission her lungs were pronounced healthy.

Dr. PARRY said that his experience would lead him to believe that there was often absence of pains in secondary cancer of the lung. This instance called to his mind two cases. A few days ago a woman died at the Philadelphia Hospital, having soft cancer of the uterus. It was supposed that she had trouble with her lungs, and after death several large cancerous masses were found in these organs. Here the symptoms of lung trouble were much less marked than he should have suspected. A second case of cancer of the uterus had also exhibited cancerous masses in both lungs, preceded by few symptoms. In both cases the so-called cancerous cachexia was profound.

Nov. 24. *Rachitis.*—Dr. PARRY presented the specimens and read the following history:—

John B., æt. 9 months, coloured, and an inmate of the Philadelphia Hospital. His mother was a very healthy woman, and had a full breast of milk. She gives a very imperfect history of her child's previous condition, but it appears that for two or three months before his death he suffered from indigestion, vomiting occasionally, and having attacks of slight diarrhœa, alternating with constipation. During this time he sweated profusely about the head and shoulders. For two weeks preceding his death he had a little cough, but he was not considered ill until November 10th, during the night of which he suddenly grew worse, and on the 11th he had fever, cough, dyspnœa, a frequent, weak pulse, and occasional vomiting. Physical examination revealed the existence of bronchitis.

The evidences of rachitis were extremely well marked; the head was large and square in outline; the sagittal suture was open, and the anterior fontanelle was extremely large, but not elevated; the frontal suture had not united, and the two halves of the bone were connected by a membrane about half an inch wide; this extended down to the root of the nose, and was continuous with the anterior fontanelle above; there was no separation of the coronal and lambdoidal sutures; over the whole surface of the occipital bone cranio-tabic spots were easily detected; dentition had not commenced.

At the base of the thorax, on a line with the ensiform cartilage, was a transverse furrow; upon each side of the chest was a vertical depression following the articulation of the costal cartilages with the ribs; at the bottom of this furrow distinct "beading" of the articulation could be felt; the sternum was prominent; the lower extremities of the radius and ulna were slightly enlarged in both arms; the bones of lower extremities were not diseased.

On the 12th the child died of the bronchitis.

Autopsy fourteen hours after death.—Body not much emaciated; anterior fontanelle depressed; between the two halves of the frontal bone was a furrow as wide as the index finger; scalp normal; anterior fontanelle an inch and a half wide, and merged into the membrane of the separated frontal suture; the tissue closing the fontanelle was normal in appearance, and that uniting the two frontal and the two parietal bones could not be distinguished from it; lambdoidal and coronal sutures normal; in the occipital bone were twenty cranio-tabic spots, the largest about three-eighths of an inch long; parietal bones consisted of two portions, the protuberances of which were prominent, well ossified, hard and translucent, and an outer portion, which was thicker, softer, more succulent and opaque; temporal bones much thickened, softened, and very porous; pericranium over the diseased bones thicker than normal, and when stripped off it brought away minute portions of bone with it; inner surface of cranial bones nearly natural in appearance; nothing abnormal about the dura mater; brain large, firm, and completely filled the cranial cavity; no hydrocephalus whatever; a little venous congestion of the organ, but otherwise it was perfectly normal; costal cartilages depressed in front of the nodules; direction of ribs normal; external enlargement of the articulation of the ribs and costal cartilages not great, but in the inner surface of the thorax the beading was remarkably well developed; lungs presented the ordinary characters of acute bronchitis; abdominal organs all healthy; no albuminoid degeneration of any of them.

These specimens present some rather unusual features. I have had numerous opportunities of making post-mortem examinations of the bodies of rickety children, but in this skull the lesions of the disease are better developed than I have ever seen them before, and until now it had never been my fortune to meet with such a remarkable separation of the frontal suture. The most noteworthy feature of the case, however, is the entire absence of hydrocephalus, which, we know, is not common in conditions like those described. Ritter von Rittershain believes that in these cases the effusion of serum is the primary step in the process, and to it he ascribes the production of the open sutures. Here, however, is an instance in which the rachitic lesions of the skull are remarkably well developed, without an abnormal quantity of serum either at the base or in the ventricles of the brain. The case is extremely interesting in being free from any cerebral complications.

It is my opinion that the frequency of rickets in this country is much underestimated. Dr. Gee has asserted that 30.3 per cent. of all the sick children coming under his observation at the Children's Hospital in London suffer from this affection. Ritter states that his investigations in the

Medical Poliklinik at Prague have shown that 31 per cent. of all the children under five years of age there treated are rickety. So far as I am aware, no statistics in regard to the frequency of this disease in this country have been published. I have been for some time investigating this subject in the children's department of the Philadelphia Hospital, and I do not hesitate to assert that 25 per cent. of all the children between two months and four years old now in that institution are rickety.

Dr. JENKS was inclined to question the complete identity of this cranio-tabial process, as met in the skull, with rachitis. It was first described by Elsässer, whose observations are exceedingly valuable, and accurate to a wonderful degree; but his pathological descriptions are vague. Virchow has not hesitated to declare the identity of cranio-tabes with rickets.

In rickets, however, we have proliferation of the cartilage-cells and irregular calcareous deposit, whereas, in cases of this sort, the bone is slowly dissolved, the intercellular substance becomes granular, the salts disappear, and then a process of absorption ensues, so that you often get pictures under the microscope in which the bone-cell is preserved, and half projects from its cavity. Rittershain also doubts the complete identity of cranio-tabes with rickets, and distinguishes two forms, a general softening of the occiput, which he characterizes as rachitic, and a partial circumscribed absorption which cannot be accepted as an evidence of rachitis.

If portions of the bone surrounding these membranous spots be ground down, and treated with sulphuric acid, a good view can be obtained of the true bone-cells, which can be tinged with iodine or carmine. In no specimen that Dr. Jenks had examined could be found any evidence that the bone-cell itself participated in the process, nor did there appear to be an increased proliferation of the periosteal cells. No theory has been advanced which will explain the occurrence of this disease. Originally it was suggested that it was caused by the pressure of the brain upon those parts, from the fact that the child passes so much time in the supine position. The theory that it was due to excess of lactic acid in the blood has been abandoned. I was induced more particularly while studying the condition of encephalitis neonatorum to believe it due to cerebral venous congestion, the bony salts being dissolved by the excess of carbonic acid in the blood. The pulmonary embarrassment, so common in rachitis, may have something to do with the formation of this cranio-tabial condition.

Dr. PARRY said cases like this were not rare in the Philadelphia Hospital. He was not willing to accept Dr. Jenks's view, that they are the result of an interference with respiration. He has found them when there is no respiratory trouble. Respiratory disorders are, in many cases, a sequel of the disease or diathesis from which the patient suffers. The complication thus arising is often fatal, occurring often where the diameters of the chest are diminished by alteration in the direction of the ribs. Very frequently I have noticed this change in children who have never had any respiratory disease.

Dr. JENKS did not intend to limit the causation of these spots of cranio-tabes to respiratory troubles, but believed that anything which produces congestion of the head might be instrumental in developing them.

Dr. MITCHELL said this specimen reminded him of one he had seen many years ago, in the child of a Scotch gardener of his father, in which, during a period of decline, there appeared several soft spots on the skull, about half an inch in diameter. A physician was called, who supposed them to be abscesses. He opened one, but no pus appeared Three months later the child died. There were eleven such perforations in the skull.

December 8. I. *Phthisis: Cavity at Apex of each Lung; Disseminated Miliary Tubercle and Cheesy Deposit.* II. *Phthisis: Cavities; Cheesy Deposit only.*—Dr. TYSON presented these two sets of lungs, with the following history:—

CASE I.—W. B., aged 19, a slipper-maker, temperate, was admitted to the Philadelphia Hospital Oct. 19, 1870. Is ignorant of causes of death of parents and five brothers and sisters. In winter of 1869–70 took cold from exposure while perspiring, since which has had cough, but has had purulent expectorations only during past three months. Recently has rapidly lost strength and flesh, and has had night-sweats with aphonia for past two weeks.

At admission was much emaciated; had aphonia and harassing cough, no sweats, but almost constant febrile movement, with daily exacerbations, and a temperature often as high as 105° in the axilla. Physical examination revealed equal dulness under each clavicle as far as second rib, but extended on left side as far as nipple; correspondingly were cavernous respiration and pectoriloquy. Posteriorly there were dulness, pectoriloquy, and cavernous respiration in supra and infra-scapular spaces.

The usual treatment was instituted, with imperfect results. Inhalations of morph. sulph. gr. ss, and pot. chlor. gr. xx to f℥j of water were, however, grateful.

The patient gradually sank, and died Nov. 30.

Post-mortem, twelve hours after death, exhibited, as to larynx, œdema of both arytenoid cartilages, more marked in the left. The interior of the larynx is the seat of almost continuous ulceration from the epiglottidean folds to below the true vocal cords, the right of the latter being completely eroded. Below these points is continuous follicular ulceration to the beginning of the trachea. The *trachea* itself, excepting anteriorly, is the seat of excavating ulceration as far as its bifurcation, more marked posteriorly, where the cartilages are absent.

The *lungs* were the seat of cavities, one in each apex, the larger in the left. But scattered throughout the remainder of both lungs were abundant cheesy deposits, between which were numerous transparent gray granulations of miliary tubercle. No pleurisy.

CASE II. was that of a miserable girl, aged about 25, who was admitted to the inebriates' ward of the Philadelphia Hospital late in September, with delirium tremens. She was treated with chloral, and recovered, but to become the victim of a rapid phthisis, which apparently beginning in solidification of the left apex, soon manifested all the evidence of cavities at the top of each lung. Treatment availed little, emaciation progressed to an extreme degree, and she died late in November, little more than two months after the first symptoms were observed. Post-mortem examination revealed extensive cavities in both lungs, and cheesy deposits occupying the calibre of the bronchial tubes of medium size, throughout each organ. No gray tubercle was anywhere present.

There are one or two points of clinico-pathological interest in connection with these cases.

In the first it is likely that the deposition of the miliary tubercle, induced, perhaps, by the absorption of the chronic bronchial deposit, occurred at the date specified, two months before admission, and from this we date the rapid decline of the case, according in these respects with recent investigations upon this subject.

Case II., however, does not, at first sight, accord with what we should expect. Here was a case of chronic bronchial disease, of the form which is ordinarily amenable to treatment, or at least does not terminate very rapidly, running its course in little more than two months. This is not usual. But, when we consider the previous history of the patient was that of a common street drunkard, with vital powers at their lowest ebb, it is not unreasonable that the case should pursue such a speedy course.

December 22. *Ovarian and Uterine Tumours.*—Dr. **PORTER** presented the specimens, with the following history:—

Maria W., aged 60, a coloured cook, of large frame, and rather fat. She was the mother of five children, the youngest being now 23 years old. She never menstruated after the birth of the last child, although she had always been regular before. Soon after this she noticed that her abdomen was enlarging, but she never paid any particular attention to it as she was enjoying good health, and continued to work till the autumn of the present year, when she began to be troubled with shortness of breath and œdema of the lower extremities. This increased to such an extent that she was soon unable to work. On the 12th of October she was seen and examined by Dr. Washington L. Atlee, who has very kindly given me the following note of her condition at that time: "She has a fatty, protuberant, and rather pendulous abdomen, independent of the tumour. The tumour has troubled her for several years. When on her back, with the abdomen exposed, the abdomen is perfectly symmetrical in shape. By the hand, however, I can detect a hard, smooth, oblong, almost round tumour in the right side, occupying the right iliac and lumbar regions, and the right side of the umbilical region, extending just beyond the linea alba towards the left. It was capable of being moved freely in all directions. The uterus is central, much heavier than usual, is occupied by an intra-mural fibroid in the fundus. The sound enters 2½ inches. The abdominal tumour can be moved in all directions without affecting the uterus." On the 17th of November she came under my care as a patient of the Philadelphia Dispensary, and I found her suffering, in addition to the abdominal symptoms, from considerable debility, with œdema of the abdomen and lower extremities, and great difficulty of breathing, so much so that she was unable to lie down except for a few minutes at a time. Her urine was scanty, high coloured, and contained albumen. She continued in very much the same condition until the 11th of December, when she suddenly became unconscious for about three hours. After this attack the prostration was much more marked, and she gradually sank, and died on the 19th of December.

Post-mortem examination twelve hours after death.—The abdomen and lower extremities were considerably enlarged and œdematous, pitting on pressure. On opening the abdominal cavity a quantity of serous fluid escaped, and the tumour was found occupying the position assigned to it by Dr. Atlee. The omentum was adherent at several points to the tumour, which was found to be attached to the left side of the uterus by a slender pedicle, about six inches long. The tumour contained about eight ounces of a thick yellowish creamy fluid, and a mass of hair glued together by a thick sebaceous-like matter. On making a section of this mass, no traces of bones or teeth were found.

The cervix uteri was elongated. The probe passed easily to the fundus of the uterus, about four inches. At the fundus an exceedingly hard and almost round tumour, of about two inches in diameter, was found. On sawing through this tumour the outer coating was found to be of a bony consistence, the inner less dense, more like fibrous tissue.

A smaller tumour, about three-quarters of an inch in diameter, of bony consistence, was situated on the posterior wall of the uterus. A fourth, much smaller, of which no section was made, was found on the anterior wall of the uterus.

The right ovary and its appendages were normal.

Dr. **JENKS** said the usually accepted immunity which follows calcification of fibroid tumours is not so great as is commonly supposed. He had seen specimens in which, instead of remaining harmless, such a tumour had produced ulceration of the walls of the uterus, and had escaped into the cavity of the abdomen, or was evacuated externally. In one case mentioned by Virchow the tumour perforated the anterior wall of the uterus, and finally the anterior wall of the abdomen. In another case it was discharged by the rectum. These results seem to depend not so much upon the size of the tumour as upon its vascular connection. Where calcification has taken place we invariably find the tumour has been almost surrounded by a capsule of connective tissue.

Another curious fact is the change in the form of the uterus produced by these tumours. Numerous cases are reported in which the uterus has been severed in its continuity, separation generally taking place at the internal os uteri, being twisted off as the result of constant stretching, combined with accidental rotation on its axis.

Another point of interest is with regard to the supply of bloodvessels. The most varied statements exist on this point. Most authorities say the supply of blood is limited. While this is true in most instances, some fibroids are exceedingly vascular. Dr. Jenks had himself examined preparations of Prof. Wedl's, showing great vascularity, so great indeed as to render the tumours appropriately classed Myoma Telangiectodes (Virchow).

Dr. **PACKARD** said that the point last referred to by Dr. Jenks suggested the case from which he had presented a specimen for Dr. Getchell, at a meeting of the Society in June. The tumour was partly through the os uteri, and, by the efforts of Dr. Getchell and himself, by traction from below and pressure from above, was completely removed, not only without appearance of any severe vascular connection, but also without hemorrhage. The uterus returned promptly to its natural condition. He had never been able to satisfy himself how thus large a mass received its nourishment, without having vessels passing to it of sufficient size to give rise to hemorrhage after its removal, or even to be discoverable by inspection.

Ulcerative Endocarditis; Embolism of Kidneys.—Dr. **WM. PEPPER** presented the specimens, and read the following history:—

James Fullerton, æt. 30, by occupation a labourer, and in enjoyment of general good health, was admitted to the Philadelphia Hospital on Nov. 4, 1870. He had been engaged in lifting and lading heavy stones, and was conscious that he had overtaxed his strength. Some weeks before admission, he was attacked with hoarseness and partial aphonia, and had cough with some mucous sputa. Continued to work for a week, but then suffered so much from dyspnœa that he had to stop. Cough continued, and became attended with hæmoptysis. Had no symptoms of rheumatism. On admission, mind clear, face anxious, skin sallow, body emaciated, no œdema. Respiration 56, frequent spasmodic cough, with hæmoptysis; lungs deeply congested. Pulse regular, soft, and small, 96 in minute. Throbbing of cervical vessels. Area of cardiac dulness increased; impulse extended, and accompanied by marked thrill. Loud, rather hoarse, double cardiac murmur. Marked præcordial pain and tenderness. Complains of intense headache. Urine dark, with abundant urates, and slightly albuminous.

Condition continued about the same, with gradually increasing congestion of lungs and failure of cardiac power. Four days before death pulse in right radial artery disappeared, evidently from embolism of the brachial artery. Death occurred Nov. 18, 1870.

At the post-mortem examination, 36 hours after death, in cool weather, body was found advanced in decomposition. The surface of the corpse was mapped out by intersecting livid lines, due to decomposition of blood in the superficial veins. The pericardium was distended with air, and contained f℥iv of bloody serum, without any traces of inflammation. The cavities of the heart were distended with air, being blown up like bladders. The blood was everywhere fluid, dark, frothy, and the vessels and surrounding tissues were deeply stained. The tissue of the heart was soft and flabby. The left cavities were moderately dilated, and the walls rather thin. The hydrostatic test showed competency of the mitral, tricuspid, and pulmonary artery valves, but free regurgitation through the aortic valves. One of the leaflets of this valve was very much thickened, and contained a considerable collection of friable granular cheesy matter. The endocardium covering this was almost entirely destroyed, and existed only as little islets of softened tissue, or as shreds hanging and floating loosely. The cheesy material was readily disintegrated, and, in fact, numerous minute fragments of it were found in the aorta and left ventricle. The other aortic leaflets were also seriously diseased; they were much discoloured, thickened, and so much softened that numerous rents and perforations had occurred. There were a few small patches of atheroma along the arch of the aorta. The right brachial artery was not examined. The *lungs* were very deeply engorged, but presented no apoplectic patches. *Liver* was soft and congested. *Spleen* enlarged, its tissue softened and dark, but with no embolic patches. *Kidneys* not enlarged, discoloured and softened, and each presented two embolic patches, one very minute, the other about $\frac{1}{3}''$ in diameter.